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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/756,380

01/14/2004

Jyrki Laaksonheimo

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07/12/2006

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EXAMINER

SMITH, TYRONE W

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/756,380

Applicant(s)

LAAKSONHEIMO, JYRKI

Examiner

Tyrone W. Smith

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### **Claim Objections**

1. Claim 7 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Examiner suggests amending the claim from the method is adaptive.

### **Claim Rejections - 35 USC § 112**

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1, 2 and 9 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: how are the averages of a speed reference and speed measurement gain and zero factors being used as it relates and identified in the present claim, also it would appear that correcting the measured speed value to compensate for drift in the feedback sensor does provide any method steps.

Claim 9 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP

§ 2172.01. The omitted steps are: since the gains and zero factors are being identified by a identifying unit, how would the identifying unit receives the information or measurement to provide a gain and zero factors.

Regarding Claims 2 and 3, the averages of speed reference and speed measurement are calculated using a sum of speed values and a total number of samples of the speed values. How would this calculate the average the speed reference? First the measured value from the feedback is a speed measurement and the number of samples of speed values is considered, how would this come into play with an average speed reference. Further, the average speed measurement is calculated from the measured values are understood but where is a total number sample of the speed values coming from.

Claims 4-8 are also rejected under 35 U.S.C. 112 second paragraph for their dependence on rejected claim 1.

### **Claim Rejections - 35 USC § 103**

4 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7 and 8 rejected under 35 U.S.C. 103(a) as being disclosed by Goto et al (5828014).

Regarding Claims 1-3, 7 and 8. Goto discloses a elevator speed control circuit which includes a measuring unit (Figure 9) for measuring a speed value of a motor; a calculating unit (Figure 9 item 2) for calculating averages of a speed reference and a speed measurement from

the measured speed value; an identifying unit (Figure 9 item 3 and Figure 9 item 36) for identifying a gain factor and a zero factor; and a correcting unit (Figure 9 item 51) for compensating a drift in the measuring unit, the correcting unit compensating for the drift on the basis of the average of the speed reference, the average of the speed measurement, the identified gain factor, the identified zero factor, and on the basis of a forgetting factor. Refer to the abstract, column 2 lines 21-64 and column 6 lines 44-58. However, Goto does not disclose the motor being a synchronous permanent magnet motor.

In re Stevens, 212 F.2d 197, 101 USPQ 284 (CCPA 1954) (Claims were directed to a handle for a fishing rod wherein the handle has a longitudinally adjustable finger hook, and the hand grip of the handle connects with the body portion by means of a universal joint. The court held that adjustability, where needed, is not a patentable advance, and because there was an art-recognized need for adjustment in a fishing rod, the substitution of a universal joint for the single pivot of the prior art would have been obvious. In this case, the use of a synchronous permanent magnet motor connected to a feedback sensor is commonplace in the motor control art; wherein Goto's reference the speed of the motor is measured thus performing all the tasks in the claims. The use of a synchronous permanent magnet motor is a minor adjustment of the current invention.

It would have been obvious to one of ordinary skill in the art at the time of invention use synchronous permanent magnet motor with Goto's invention a elevator speed control circuit. The advantage of combining the two would provide a system that would actively suppress the vibration of an elevator car used by the speed control circuit.

6. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al (5828014) in view of Sawai et al (4967128).

Regarding Claims 9. Goto discloses a elevator speed control circuit which includes a measuring unit (Figure 9) for measuring a speed value of a motor; a calculating unit (Figure 9 item 2) for calculating averages of a speed reference and a speed measurement from the measured speed value; an identifying unit (Figure 9 item 3 and Figure 9 item 36) for identifying a gain factor and a zero factor; and a correcting unit (Figure 9 item 51) for compensating a drift in the measuring unit, the correcting unit compensating for the drift on the basis of the average of the speed reference, the average of the speed measurement, the identified gain factor, the identified zero factor, and on the basis of a forgetting factor. Refer to the abstract, column 2 lines 21-64 and column 6 lines 44-58. However, Goto does not disclose the use of a forgetting factor or similar for updating the gain factors.

Sawai discloses a servo motor control device which includes forgetting factors (Figure 7 items 1/Ki and Kif) or similar (Figure 7 item A; column 1 lines 57-68 and column 2 lines 1-16)

However, neither Goto nor Sawai disclose the motor being a synchronous permanent magnet motor.

In re Stevens, 212 F.2d 197, 101 USPQ 284 (CCPA 1954) (Claims were directed to a handle for a fishing rod wherein the handle has a longitudinally adjustable finger hook, and the hand grip of the handle connects with the body portion by means of a universal joint. The court held that adjustability, where needed, is not a patentable advance, and because there was an art-recognized need for adjustment in a fishing rod, the substitution of a universal joint for the single pivot of the prior art would have been obvious. In this case, the use of a synchronous permanent magnet motor connected to a feedback sensor is common place in the motor control art; wherein Goto's reference the speed of the motor is measured thus performing all the tasks in the claims. The use of a synchronous permanent magnet motor is a minor adjustment of the current invention.

It would have been obvious to one of ordinary skill in the art at the time of invention to Goto's invention with Sawai's invention. The advantage of combining the two would provide a motor control device in which the torque or speed is not affected by the rotation of the motor.

7. Claims 4-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al (5828014) as applied to claims 1-3, 7 and 8 above, and further in view of Sawai et al (4967128).

Regarding Claims 4-6. Goto discloses a elevator speed control circuit which includes a measuring unit (Figure 9) for measuring a speed value of a motor; a calculating unit (Figure 9 item 2) for calculating averages of a speed reference and a speed measurement from the measured speed value; an identifying unit (Figure 9 item 3 and Figure 9 item 36) for identifying a gain factor and a zero factor; and a correcting unit (Figure 9 item 51) for compensating a drift in the measuring unit, the correcting unit compensating for the drift on the basis of the average of the speed reference, the average of the speed measurement, the identified gain factor, the identified zero factor, and on the basis of a forgetting factor. Refer to the abstract, column 2 lines 21-64 and column 6 lines 44-58. However, Goto does not disclose the use of a forgetting factor or similar for updating the gain factors.

Sawai discloses a servo motor control device which includes forgetting factors (Figure 7 items 1/Ki and Kif) or similar (Figure 7 item A; column 1 lines 57-68 and column 2 lines 1-16)

However, neither Goto nor Sawai disclose the motor being a synchronous permanent magnet motor.

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art-recognized need for adjustment in a fishing rod, the substitution of a universal joint for the single pivot of the prior art would have been obvious. In this case, the use of a synchronous permanent magnet motor connected to a feedback sensor is common place in the motor control art; wherein Goto's reference the speed of the motor is measured thus performing all the tasks in the claims. The use of a synchronous permanent magnet motor is a minor adjustment of the current invention.

It would have been obvious to one of ordinary skill in the art at the time of invention to Goto's invention with Sawai's invention. The advantage of combining the two would provide a motor control device in which the torque or speed is not affected by the rotation of the motor.

### **Response to Arguments**

8. Applicant's arguments filed April 15, 2006 have been fully considered but they are not persuasive.

Applicant argues that the references do not disclose (1) averages of a speed reference and a speed measurement for downward and upward constant speed travel are calculated and (2) that gain and zero factors are identified. Examiner takes Applicants arguments in full consideration.

The Examiner keeping in mind in 35 U.S.C. 112 second paragraph rejection above bases examiner's rejection on the claims as presented and best understanding of the claims. Goto discloses an elevator speed control circuit, which includes a measuring unit (Figure 9) for measuring a speed value of a motor; a calculating unit (Figure 9 item 2) for calculating averages of a speed reference and a speed measurement from the measured speed value. The average of the measured speed and reference speed is calculated since the claims did not establish what would be the speed reference and speed measurement. Further, an identifying unit (Figure



9 item 3 and Figure 9 item 35) for identifying a gain factor and a zero factor which Goto does identify a gain and zero factors in the drawing and specification remembering that the rejection is based on the claims as presented. Examiner submits this current rejection as a non-final since the claims objection and 35 U.S.C. 112 second paragraph was not used in the previous office action.

Applicant argues that the use of official notice should not be used in the office action with regards to the use of a synchronous permanent magnetic motor. Examiner uses *In re Stevens*, 212 F.2d 197, 101 USPQ 284 (CCPA 1954) (Claims were directed to a handle for a fishing rod wherein the handle has a longitudinally adjustable finger hook, and the hand grip of the handle connects with the body portion by means of a universal joint. The court held that adjustability, where needed, is not a patentable advance, and because there was an art-recognized need for adjustment in a fishing rod, the substitution of a universal joint for the single pivot of the prior art would have been obvious. Goto relates to a elevator speed control circuit not unlike the one mention in the claims and specification where a measurement of the motor speed is used. The use of a synchronous permanent magnet motor connected to a feedback sensor is commonplace in the motor control art with Goto's reference the speed of the motor is measured thus performing all the tasks in the claims. Again, the use of a synchronous permanent magnet motor is a minor adjustment of the current invention.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W. Smith whose telephone number is 571-272-2075. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan, can be reached on 571-272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tyrone Smith  
Patent Examiner

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**LINCOLN DONOVAN**  
**SUPERVISORY PATENT EXAMINER**